

Ground-Breaking Alternative Energy Science Initiative Starting at HISD

More than \$330,000 in funding for unparalleled business/education/government partnership

January 14, 2009

This article has been updated to reflect the HISD Board of Education's approval of this plan on January 15.

Students at HISD's **Booker T. Washington High School** (119 East 39th, 77018) will create fuel from cafeteria scraps to power their own science lab, a generator, and a model plane using a patented process, thanks to an unprecedented program launching in the fall of 2009.

In addition to that initiative, the **New Science Energy** program at HISD will challenge nearly 6,000 of the district's eighth-, ninth- and tenth-grade students to create energy independence in the future.

The New Science Energy program is an unparalleled collaboration between HISD, Chevron, and other industry, university, and government partners. Chevron is donating \$250,000 for the program, which has two main components: a custom-created computer game that incorporates developing clean, efficient, renewable energy solutions, and classroom experiments, such as Washington High School's fuel experiment, supported by visits from industry mentors. The New Science Finale and EXPO will be held at Space Center Houston in February, 2010.

The Boeing Company will donate \$25,000 to the New Science Energy program, and in-kind donations will come from: Dynegey, \$10,000; Texas A&M University, \$10,000; Space Center Houston, \$10,000; U.S. Department of Energy, \$8,000; Baker Hughes, \$5,000; Clean Fuels Energy, \$5,000; Electrical Power Research Institute, \$5,000; and Reliant Energy, \$5,000.

The HISD Board of Education voted to accept the funding on January 15.

HISD's New Science program team, including Dr. Nghia Le from Washington High School and Dee Puls from HISD's Strategic Partnerships Department, is collaborating with the U.S. Department of Energy, Space Center Houston, Texas A&M, and many leading industry partners to inspire and educate students to participate in the new frontier of efficient alternative energy and technology.

"I'm incredibly excited about the opportunity to provide our students with this inquiry-based research project," said Washington High School Principal Mark Bedell. "Dr. Le is perhaps one of the most innovative teachers in the district. Research indicates that 90 percent of stimulatory learning is retained by students. The food scraps to fuel project and science program game will provide this high-level rigor and relevancy to our students. All of Dr. Le's lessons are developed with the necessary rigor and relevance needed to push students far above their current functioning level. It is our intent at Washington High School and the High School for Engineering Professions to continue to develop outstanding students who will ultimately enter college at an exemplary level."

As part of the computer game simulation, students will switch a virtual company from a fossil-fuel-based energy supply to a hybrid energy supply that realistically incorporates efficient, renewable, and cleaner energy. The game simulation will tie abstract math and science theories to real-world energy solutions.

Leading energy companies will provide program content detailing the latest energy solutions and HISD curriculum staff will align this with the relevant Texas Essential Knowledge and Skills. Energy company mentors will be paired with participating teachers at the teacher training to be held at Chevron, and HISD students will have strong assistance from industry mentors who embody the best of science, technology, and engineering. Prizes will be awarded to students with the highest game simulation scores, which will be continuously posted on the New Science Energy Web site.

Teachers and their classes may develop an energy experiment to demonstrate at the New Science Finale, such as Washington High School's plan to turn food scraps into fuel. To find out more about the New Science Energy project, please visit www.newscienceenergy.com.

Adding to the district's green initiatives, HISD submitted a project to the Texas Commission on Environmental Quality (TCEQ) that is estimated to reduce emissions of oxides of nitrogen from forklifts used within the Food Services Department. The estimated reduction over a 10-year period is 1.83 tons. The project submitted by HISD was approved by TCEQ. The grant for this program is \$18,009.